Shundahai Network
PO Box 6360
Pahrump, NV 89041
775-537-6088 fax: 775-537-6588
shundahai@shundahai.org
www.shundahai.org

RECEIVED
JUL 11 2001

010353

To:

Dr. Jane Summerson
EIS Document Manager
U. S. Department of Energy
Yucca Mountain Site Characterization Office
P.O. Box 30307 M/S 10
North Las Vegas, NV 89036-0707

July 6, 2001

Shundahai Network is an international organization working towards the protection of all life from radioactive contamination resulting from nuclear power, nuclear weapons and nuclear waste. We support the sovereignty of indigenous nations worldwide. Shundahai Network is based in Pahrump, Nevada, close to the proposed Yucca Mountain Project, and we work closely with this and other affected communities. These comments on the Supplement to the Draft Environmental Impact Statement for a Proposed Repository at Yucca Mountain, Nevada, are being submitted on behalf of Shundahai Network.

ENVIRONMENTAL JUSTICE

1 Land use vs. Ownership: This entire supplement is geared towards meeting proposed regulations for a nuclear waste repository (NRC Proposed Regulations Part 63), not the current regulations (which Yucca Mountain fails to meet). The NRC proposed regulations state that DOE must own the land that it plans on using for this repository. DOE has plans to withdraw the land from other federal agencies who are the acting landlords, yet none of these agencies has actual ownership of these lands- no title, no proof of purchase. These lands belong to the Western Shoshone Nation according to the 1863 Treaty of Ruby Valley. The United States has never purchased Yucca Mountain, or the surrounding region, and cannot claim gradual encroachment on lands that are still 80% unoccupied. While DOE may assume control of Yucca Mountain, it does not own it and neither the Supplement nor the DEIS indicate how the DOE plans on taking ownership.

2 Throughout this document the words "Opposing Native American Viewpoint" are seen. This is something that DOE cannot just sweep under the rug. The recognition that there is an opposing viewpoint is something that the DOE has done correctly- not doing anything about it is environmental racism. This is another reason why this project should be ended right now, for it does not take the ongoing traditional uses of the Yucca Mountain region into consideration when judging the impacts of the project.

CULTURAL RESOURCES

3 The site of the proposed surface aging facility described in the SDEIS is occupied by a "known archaeological site", a sacred treasure to the indigenous people of the area. The SDEIS fails to address how many of these sites, potentially eligible for listing on the Nation Register of Historic Places would be protected. DOE says they will develop a plan at some future date, yet gives no timeline for when that will happen, or any assurance that it will actually take place. These sites, these precious resources of traditional history. In an area where there have already been more than 25,000 cultural artifacts stolen and moved, this threat to the cultural resources is environmental racism.

WATER

4 In the higher temperature scenarios which were described in the SDEIS, drifts would be 81 meters apart, this is so that water moving through fast pathways would not pool above all of the drifts, and would instead find its way through the spaces between the drifts. The SDEIS seems to be telling people that there is no way to keep water from moving close to the waste packages (even with the fancy titanium drip shields) and that there are indeed fast pathways which can move water more quickly to the water table.

5 The evaporation pond, which is described in the SDEIS as a method of dealing with wastewater from the site, does not talk about
6 the removal of sludge from that pond and their environmental/health effects. The SDEIS also does not talk about what could happen if the area of the waste ponds flood, or are damaged by earthquakes.

7 The SDEIS talks about the Low-Level Radioactive wastes, which would be generated from the project, and declares that those wastes would take up 2.3% of NTS LLRW disposal capacity. How was the capacity of the NTS determined? Does this projection take into consideration the projections for LLRW disposal over the next few centuries?

1

8 The SDEIS does not suggest a plan for how water will be attained for the site. The State of Nevada Water Engineer has denied a permit for water use at Yucca Mountain. There is no reason to believe that the DOE will win its appeal attempt. The SDEIS should have included information about how the DOE plans to acquire water and move it to the site. These actions could have a potentially harmful effect on air and water quality in this region as well as the region where the water would come from. Not making any sort of contingency plan for how this water will be acquired shows a failure in DOE's planning.

WORKER RIGHTS/ HEALTH ISSUES

9 As an organization based in Pahrump, NV, we are very concerned about our fellow community members who might eventually work at the Yucca Mountain repository. The SDEIS says there might be between 170,000 and 800,000 curies of radon released in the construction phases of this project- this is a tremendous amount of radioactivity to which our fellow community members could be exposed. There are no EPA regulations that cover radon released during construction, but the national outdoor air level for radon is .04 (pCi/l) pico curies per liter of air- the SDEIS does not state whether the releases during the construction phase will meet EPA regulations. Of course DOE will do everything possible to protect its workers from potential contamination, these elevated levels of radon released into our atmosphere are a concern and the SDEIS fails to address the impact of these elevated levels on the workers at the site- and the families that they would bring this contamination home to.

10 On page S-7 of the SDEIS it is mentioned that the mean annual dose to the public would rise after 10,000 years, and in fact the peak dose to the public wouldn't come until much later. While we recognize that DOE has not been specifically directed by Congress to design a repository that will isolate dangerous radioactive contamination from the public forever, one hopes that any repository built would at least be able to contain the radioisotopes past the point of maximal release. A National Academy of Sciences panel has said that the regulatory period for this project should be a million years- in order to capture the period of peak dose. Tom Pickford, who worked for the EPA for many years and had originally proposed the 10,000 year regulatory period has realized his mistake and asked the EPA to extend that regulatory period. This needs to be taken into consideration in the DEIS- how will the repository operate under a million year regulatory period?

11 There are many concerns on the dose reconstruction studies performed for this DEIS that no one looked at the nuts, and the nut eaters. One of the traditional foods in the area of Yucca Mountain is the pinyon or pine nut. There are also a number of nut farms in the Amargosa Valley region. DOE did look at the impacts of eating green leafy vegetables and some of the other vegetation in the vicinity, yet no study was done on the cumulative health impacts of eating nuts. Many types of nuts concentrate heavy metals, and then transfer that concentration onto the next level of the food chain. Neither the Supplement nor the DEIS took this information into consideration, and this is a serious failure on the part of DOE.

12 There is an assumption in the SDEIS that the maximally exposed individual will be 20 km from the repository site, yet the recently released EPA regulations allow only an 11 mile "buffer zone". The SDEIS allows an additional 1.4274 miles before the maximally exposed individual is counted.

13 Both the SDEIS and the DEIS fail to address population increases which are shown by demographic trends.

EVOLVING DESIGN

14 This next step in design evolution which is described in the SDEIS is just as vague as it was in the DEIS. The actual repository size is still unknown, it might be one of two scenarios, or it could be an as of yet undisclosed third scenario.. No one knows how hot the repository might be- and the bounds in which the temperature might fall are pretty vague as well.

15 The SDEIS indicates a huge increase in the need for ventilation, and increases the proposed number of ventilation shafts- how will more shafts impact the drip shields? How will they impact the structural integrity of the overall repository design? These are issues that were not adequately addressed in the SDEIS.

16 The lower temperature design, which is mentioned as a possibility in the SDEIS, assumes the use of an area that hasn't been studied yet. This is seen on page 2-20. Since this area has not been studied yet, there is the possibility of many fast-pathways of water movement, earthquake faults and possibly evidence of igneous activity that may not have been seen in the studies done to date.

DRIFT SPACING

17 Where to put the waste packages- this seems to be a question plaguing not only DOE, but most of the nuclear power industry as well. The SDEIS looks at a number of options for how to space the waste packages to keep temperatures within range, yet there is no mention of how those either closely spaced or widely spaced packages might create more of a hazard. There was no mention in the SDEIS of how waste package spacing could be impacted by accidental bombings from Nellis bombing range (the air force has a history like DOE- and doesn't always get exactly what it's aiming for), or terrorist activity.

DRIP SHIELDS

18 There are many questions that arise from the DOE study of the drip shields, as with much of this project, you don't really get any answers to your questions, just more questions. One of these questions that were not addressed in the SDEIS is where the drip shields would divert moisture? The images shown in the document show a slight railing along the shields, which would seem to be a gutter of sorts, yet there is no description of where this moisture would go- possibly between the drift walls? Possibly back into fissures in the rock? It could potentially evaporate right off the drip shields depending on how hot those would be (but that information isn't in the SDEIS either); there is no clear answer to how these would really work to protect the environment from the waste.

19 The SDEIS states that the drip shields would not be put into place until the repository closes- what happens if that is more than 300 years away? The drip shields are designed to protect waste packages from possibly corrosion. If the waste packages are in place for 300 years before the drip shields are placed, that allows for 300 years of rainfall to corrode these packages. If the higher-temperature scenario becomes a part of the final design then there will still be 50 years before the drip shields go into place. According to the SDEIS 2.3.4.1 (p. 2-25) if the drip shields aren't in place water will drip onto the waste packages "increasing the likelihood of corrosion". SDEIS does not adequately describe a method for preventing that corrosion until the drip shields can be put into place.

WASTE PACKAGES

20 The waste package performance, as well as the performance of the new Alloy-22, is the subject of an international peer review. Can the DOE go ahead with a Site Recommendation before this peer review is complete? The analyses of this new metal, and it's supposed performance under extreme conditions (which would be found inside the repository), is all relatively new information. The metal- alloy-22, only about 20 years old, has not been in place long enough for any reasonable assertion that it can withstand even ten thousand years of intense irradiation, dripping water, and earthquakes without failing. The SDEIS should not have made any assertions about this "wonder-metal" until the peer review is complete, and the Final EIS should not be released until it can include that information as well.

THE BUGS

21 The SDEIS fails to talk about the microorganisms that live inside of Yucca Mountain. These cannot survive the heat that would initially be given off by the waste packages, but after 1500 years all of the waste inside of Yucca Mountain would be below the boiling temperature of water, and cool enough for these "bugs" to re-infest the mountain and corrode the waste packages. This information needs to be taken into consideration during the site recommendation process, and should encourage rejection of the site's suitability.

ON SITE COOLING

22 There are several new elements described in the SDEIS that have never been brought into the Yucca Mountain discussion before: on-site fuel cooling, and fuel blending pools. These surface facilities, as described, would not be able to get a license under NRC part 72, due to seismicity. If they cannot meet those standards, already in place, how are they expected to protect public health and safety?

FUEL POOLS

23 The expansion of the waste handling building described in the SDEIS indicates that the waste packages will be opened and mixed at the site. There is no analysis in the SDEIS of what could happen if an earthquake struck while the fuel was in the process of
24 being blended. This suggestion of fuel blending has never been done before. It requires the knowledge of the exact history of each fuel assembly. It requires perfect record keeping. The nuclear industry does not have a history of perfect record keeping.
25 Fuel blending greatly increases the chances of accidents caused by human error; this is not taken into consideration in the SDEIS.
The SDEIS also fails to describe the mechanics of how this fuel blending would be done, or what the potential impacts of
26 incorrect record keeping could be. The SDEIS also fails to address the potential impacts of a major earthquake on the four fuel pools described in this project. What would happen if the fuel pools collapse? If all the water were to drain out- is there a possibility of those fuel assemblies going critical? These issues need to be taken into consideration and suggest that the site is not yet ready for recommendation.

STORAGE PAD

27 The SDEIS indicates that there could be a need for more surface cooling of the fuel assemblies, and suggests building an on-site above ground monitored retrievable storage area. What's the rush to move the fuel if it's just going to sit in dry casks at Yucca Mountain? Why doesn't the DOE assume responsibility for putting the waste into dry casks at the reactor sites?

28... RENEWABLE ENERGY

There is a certain irony in powering a nuclear waste repository with renewable energy. While Shundahai Network supports the use of alternate and renewable energy as an alternative to nuclear power, it is shocking to consider that the yucca mountain project would not be using enough solar power to justify the production of transmission lines. The sun beams brightly on Yucca

28 cont Mountain, and it is a good source of energy, however, if it is to be used in this project, solar should be the primary source of power at the site, and enough power should be generated and used to really get something out of it. This flippant concession to environmentalists is not enough to justify the project.

RULES AND REGULATIONS:

29 The SDEIS assumes that the NRC proposed regulation, part 63, will be made into law. This is a premature assumption, which endangers the health, safety and sanity of many people. To assume that the site will meet regulations which the public has never seen is an insult greater than the "Screw Nevada" bill. There can be no Final EIS until all of the proposed regulations are adopted and DOE can assert that it can meet those regulations.

CONCLUSION

There is no way to guarantee that the waste packages won't fail, just as there is no way to guarantee that there won't be floods at the site, yet somehow DOE wants to make a guarantee that it can meet regulatory requirements? This does not seem possible, with water moving quickly through the mountain, no specific design chosen, and assertions of the ability to meet regulatory requirements before those regulations are put into place.

30 The need for ongoing study and analysis indicates that the site is not yet ready for recommendation, or to begin the licensing process with the NRC. This is a project that is projected to cost the public at least $56 billion, and is doomed to failure from the get go. It would only cost $100,000 per metric ton to store the current stockpile of spent fuel in dry casks on site. This is an economically feasible alternative to the Yucca Mountain project

Susi Snyder, Program Manager.